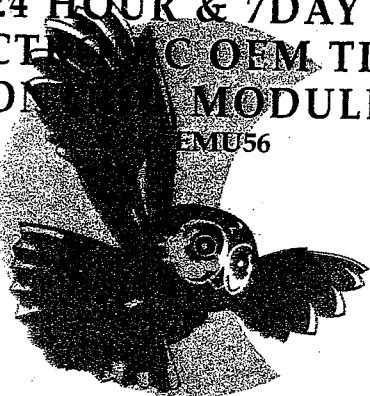# 24 HOUR & 7DAY ELECTRONIC OEM TIME CONTROL MODULE
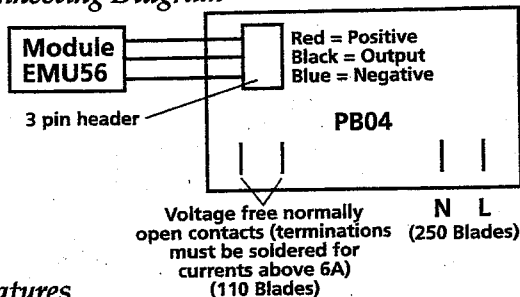
EMU56

TIME GUARD
LIMITED

OPERATING INSTRUCTIONS

The EMU56 Electronic Time Control Module is intended for use in OEM equipment. It is designed to operate from 1.25 – 1.65V supply and produces an open collector PNP outlet suitable for sourcing up to 0.25mA from the 1.5V supply when in the ON state. The module operates within the temperature range –10° to 50°C.

The EMU56 is designed for use with the PB04 power board which is operated from 220-240V AC mains, provides a relay output with voltage free normally open contacts which can carry up to 10A resistive or 6A inductive, and provides a battery backup supply to the module. PB04 operating temperature –10°C to 60°C.

The EMU56 is supplied with a black plastic bezel size 60 x 47mm to fit panel cut out 56 x 44mm. The PB04 power board occupies an area of 51 x 61mm and requires clearance of 30mm above the PCB.

Connecting Diagram

Module EMU56 — 3 pin header — PB04

Red = Positive
Black = Output
Blue = Negative

Voltage free normally open contacts (terminations must be soldered for currents above 6A) (110 Blades)

N L (250 Blades)

Features

* 112 memory locations
* 8 ON and 8 OFF different switching commands available each day (up to 56 ON/OFF switchings per week)
* Self cancelling ON and OFF override
* Day and time omit capability
* Shortest switching interval 1 minute

Programming

Five setting buttons are provided, the Set button is used to sequence the module in programming mode. The Day, Hrs and Mins buttons are used to set the days, hours and minutes required.

ON/OFF programmes can also be overridden till the third subsequent programme change by using the O'ride button. To prepare the module for programming clear the memory by pressing both the Set and Day buttons simultaneously until the display disappears. On releasing the buttons the display will show 0:00 INT with the colon flashing.

Setting the Clock Time

To set the clock time press the Set button briefly and release, the display shows 0:00 with "C" flashing at the right of the display. Press the Day button until the black dot indicates the desired day of the week (1-7). If in doubt, use day 1 as Monday.

Use the Hrs button to set the hours followed by the Mins button to set the minutes to the actual clock time. Rapid selection can be achieved by continuously holding down either the Hrs or Mins buttons.

If the Set button is now pressed briefly and then released, the display will return to the correct time of day with the colon flashing. The module is now in its operating condition and will switch "ON" and "OFF" according to the programmes set. To alter the clock setting subsequently there is no need to clear the memory first.

NB: Pauses of 15 seconds or more during clock setting will result in automatic return to the operating condition.

Important: After setting a clock time which falls within a programmed "ON" period, the unit will not switch "ON". An "ON" time only (leaving the "OFF" time blank i.e. —:—) can be programmed for just after the current clock time on the current day and the unit will turn "ON" when the clock time equals

the programmed "ON" time and behave to programme subsequently. There is no need to remove this "ON" programme after start up.

Planning the Programmes

A programme is a pair of ON/OFF settings, which will dictate when the appliance will switch "ON" and "OFF". Programmes can be set before or after setting the clock time. Programmes can be carried over midnight by programming the required "ON" time and then an "OFF" at 0:00 for the first day, followed by an "ON" at 0:00 and the required "OFF" time for the second day.

Setting Programme 1

Press the Set button and hold it down for about 3 seconds until the display shows – –:– – with a flashing "1" (indicating programme 1) appearing underneath the "ON" indicator and the day indicator will point to day 1. To programme the first ON/OFF times for day 1 set the "ON" time required by

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pressing the Hrs and Mins buttons separately until the desired time is displayed. Press the Set button briefly, and the display will show - -:- - °ᴴⁱ with "INT" appearing underneath the flashing "1". Note: INT = Interrupt and means "OFF". The first "OFF" time for·day 1 can now be programmed by using the Hrs and Mins buttons. Press the Set button briefly and the display shows - -:- - °ᴹ and the programme 2 "ON" time can be entered as for programme 1.

NB: Pauses of 15 seconds or more during programming will result in automatic return to the operating condition.

Programming the module for day 1 should continue in this way up to the programme eight if so desired.

Note: It is not necessary to enter all eight programmes available to you on this day, those not required should be left blank (—:—). You can also omit by not programming any ON/OFF times on the day you require no switchings.

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Setting Programmes – Day 2, 3 etc.

If the display still shows a day 1 "ON" or "OFF" programme press the Day button, and the day indicator will move above day 2. If, instead, the display shows the clock time with the colon flashing press the Set button and hold down for about 3 seconds until the display shows the first programme "ON" time for day 1. Press the Day button again briefly and the day indicator will move above day 2. In either case the display will change to - -:- - °ᴹ with a flashing 1 (indicating programme 1 on day 2) appearing underneath the "ON" indicator.

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The required programmes can now be set for day 2 in the same way as for day 1. Days 3 to 7 can be programmed in the same way as for days 1 and 2.

Once the programming is complete press the Set button for about 3 seconds until the display returns to the correct time of day with the colon flashing. The module is now in its operating condition.

Suspending Programmes

Press and hold down the Set button for about 3 seconds until the first "ON" programme, day 1 is displayed. Press the Day button repeatedly until the day indicator points to the day on which you wish to suspend the ON/OFF time. Press the Set button repeatedly until the "ON" or "OFF" time of the programme you wish to suspend is displayed.

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Now press the O'ride button. A black "X" will appear indicating that both the "ON" and "OFF" times for this programme have been suspended until reinstatement by the user. There is no limit to the number of programmes you can suspend.

To reinstate a suspended programme return to either the "ON" or "OFF" time of the programme which has been suspended and cancel the black "X" by pressing the O'ride button. The ON/OFF programme will now operate on the selected day.

Reviewing the Programmes

Press and hold down the Set button for about 3 seconds until the first programme "ON" time for day 1 is displayed. Press the Day button repeatedly until the day indicator points to the day to be reviewed after which repeated brief pressing of the Set button will display each programme or unused setting in

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sequence for that day. At any point the setting may be altered, if required, by use of the hour and minute buttons. To review another day press the Day button until the day indicator points to the required day and use the Set button to select programme times as before.

Overriding the Module

To override the programme in operation, and to immediately switch the device ON or OFF, simply press the O'ride button. The display will change from "ON" to flashing "INT" or vice versa. The override automatically cancels when the third subsequent programme change occurs.

SHEET 2   2/2(Doi)